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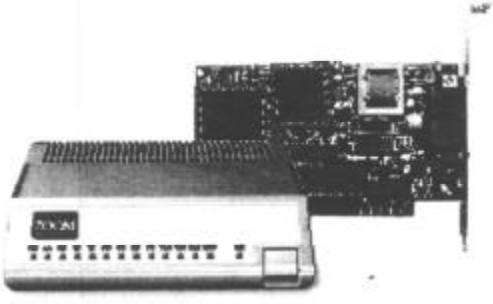
# The Zoom V.34I[Plus] and V.34X[Plus] FaxModems

WE MAKE DATA COMMUNICATIONS

ZOOM

Jameco Part Number 181796



The Zoom/FaxModems V.34I Plus (internal) and V.34X Plus (external) for PC and V.34X Plus for Macintosh provide 28,800 bps uncompressed data transmission over conventional telephone lines, using the V.34 protocol and up to 33,600 bps with enhanced data throughput. The V.34 standard is the fastest data communications protocol approved by the ITU, the international standards body for telecommunications.

The V.34I Plus and V.34X Plus also provide 14,400 bps send/receive fax, and full V.32bis compatibility for connection to slower modems.

Bundled software with PC models includes: WinfaxLite, DOSfax and COMit data communications for DOS and Windows®; with Macintosh model: STF full-featured and MicroPhone LT.

## About the Zoom/FaxModems V.34I Plus and V.34X Plus

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The Zoom/FaxModem V.34I Plus internal and V.34X Plus external are full-featured modems that support both the international V.34 standard for 28,800 bps data transmission and 33,600 bps for enhanced throughput. They also support Class 1 and Class 2 fax at speeds up to 14,400 bps. Since these faxmodems also support the international standards at slower speeds and can automatically adjust to slower speed modems and faxmodems, they will communicate with virtually any modem or fax machine in the world. They are ideal for accessing on-line services and the Internet.

The Zoom/FaxModem V.34I Plus and V.34X Plus are designed for high-speed, error-free communications. The V.34I Plus and V.34X Plus use adaptive line probing and multi-dimensional trellis coding techniques to achieve very high data throughput and reliable connections. They can communicate at up to 33,600 bps with uncompressed data. When the data can be compressed using the built-in V.42bis and MNP compression, even higher speeds can be achieved. They also support V.42 and MNP automatic error correction, and MNP 10EC™ for more reliable cellular, transcontinental, and international communications. Since all these standards are hardware-based, all connections are automatically negotiated for the fastest speed and the highest possible level of compression and error correction supported by both modems.

The Zoom/FaxModem V.34I Plus and V.34X Plus also support the V.17 fax standard for fax speeds up to 14,400 bps when communicating with other V.17 compatible modems and fax machines, and at 9600 bps for most other fax machines. For many applications you'll find these products are faster, easier and produce results that are superior in quality to a conventional fax machine. They make it easy to "broadcast" personalized faxes to groups of people, to schedule fax deliveries when connection rates are low and to forward a fax with no loss of clarity. The quality of faxes sent with a Zoom/FaxModem is far better than the quality of those sent using a fax machine.

The Zoom/FaxModems V.34I Plus and V.34X Plus support the complete Hayes command set, plus all the Microcom commands required for MNP operation.

They are built in the USA by Zoom Telephonics, Inc., a leading supplier of telecommunications equipment since 1977, and backed by Zoom's outstanding seven-year warranty.

## Features

- True V.34 (ITU international standard) 28,800 bps technology
- Supports both the V.34 ITU standard and V.Fast Class (V.FC) at 28,800 bps.
- Fully compatible with all other international standards, including 14,400 bps (V.32bis) and slower speeds.
- 28,800/26,400/24,000/21,600/19,200/16,800/14,400/12,000/9600/7200/4800/2400/1200/3( bps V.34/V.FC/V.32bis and 33,600/31,200 enhanced data throughput data pump
- 100% Hayes AT Command Set compatible, with extended MNP and V.42 Command Set
- V.17 protocol for 14,400 bps fax capability
- Group 3 fax, Class 1 (EIA/TIA 578) and Class 2 (EIA/TIA 592)
- V.42bis and MNP 5 data compression
- V.42 compliant error correction (LAPM and MNP)
- MNP 10EC Enhanced Cellular Technology for reliable cellular, international, and rural communication with V.22bis, V.32 and V.32bis
- Ability to manually force MNP 5, V.42bis, V.42 or MNP 4
- Auto-negotiation of highest level of data compression (V.42bis, MNP 5) and error correction (V.42, MNP 2-4, MNP 10EC)
- High-speed 16550 UART with 16-byte bi-directional buffer for faster data throughput (internal only)
- Automatic Adaptive Equalization

- Extended status reporting with 14 LED status indicators (external only)
- Configurable for COM ports 1-4, interrupts 2-5 (internal only)
- Dual RJ-11 phone jacks-one for phone line, one for optional phone
- Audio speaker with software volume control
- Alternate modem configuration storage in nonvolatile RAM
- Automatic Gain Control
- Automatic self-diagnostics
- Digital and analog loop back diagnostics
- Serial ITU-TSS (CCITT) V.24 (EIA-232-D) interface (external only)
- Automatic terminal to modem speed sensing up to 115,200 bps
- Speed buffering/Flow control
- Direct mode option (pass through data path)
- Call progress tone decoding - busy, ring, and dialtone
- Line quality monitor and retrain capability
- Auto-dial/Auto-answer
- Tone and pulse dialing - software switchable
- Phone number directory (four 35-digit number strings stored in non-volatile memory)
- Inactivity Timer - when set, causes hang up if no data for programmable time (1-42 minutes)
- Automatic Speed Sensing - automatically adjusts to calling modem/fax
- Extensive communication software compatibility
- Seven-year warranty

## Technical Specifications

**Data Encoding**
33,600/31,200 enhanced data throughput
28,800/26,400/24,000/21,600/19,200/16,800/14,400 - V.34
28,800/26,400/24,000/21,600/19,200/16,800/14,400 - V.FC
14,400/12,000/9600/7200 bps - V.32bis
9600/4800 bps - V.32
2400/1200 bps - V.22bis
1200/600 bps - Bell 212A, V.22A/B, V.23
300 bps - Bell 103, V.21

**Fax Encoding**
14,400/12,000 bps - V.33, V.17
9600/7200 bps - V.29, V.17
4800/2400 bps - V.27 ter
300 bps - V.21 channel 2

**Flow Control**
RTS/CTS, XON/XOFF, transparent XON/XOFF, modem-to-modem

**Terminal-to-Modem (DTE)Data Rates**
115,200/57,600/38,400/19,200/14,400/9600/7200/4800/2400/1200/300

**"AT" Automatic Speed Sense Data Formats**

| Parity | Data Length | Stop Bits |
|---|---|---|
| Odd | 7 | 1 |
| Even | 7 | 1 |
| None | 8 | 1 |

| | |
|---|---|
| **Diagnostics** | EIA TR30.2 (Analog Loopback, Analog Loop Self-Test, Remote Digital Loopback, Remote Digital Loopback with Self-Test, Digital Loopback) |
| **Operation** | Full Duplex over Two-Wire Switched Lines.<br>Automatic or Manual Originate and Answer Modes |
| **Equalization** | Automatic Adaptive Equalization and Gain Control |
| **Dialing Capability** | DTMF (Touchtone) and Pulse Dial, Programmable DTMF Tone Duration |
| **Command Buffer** | 40 Characters |
| **S-Registers** | S0 through S41, S44, S46, S48, S80, S82, S86, S90, S91, S95 |
| **Non-Volatile Storage** | |
| **Commands Stored:** | B E L M N P or T Q V W X Y<br>&C &D &G &J &K &P &Q &R &S &T &Y |
| **S-Registers Stored:** | S0, S6-12, S14, S15, S18, S21-23,<br>S36, S37, S40, S41, S44, S46, S48, S95 |
| **MNP Commands** | %C &Q5 W \A \B \G \K \L \N |
| **MNP S-Registers** | S36 S38 S40 S41 |
| **V.42 Registers** | S36 S46 S48 S82 |
| **Audio Monitor** | High-efficiency transducer |
| **Terminal Interface** | CCITT V.24 (EIA-232-D) compatible<br>Female DB25 connector, 8 signal lines supported (external only) |
| **Telephone Interface** | Modular phone jacks (two RJ-11type) |
| **Configuration** | Stand-alone (external)<br>fits PC compatible slot (internal) |
| **Power Supply Cube** | Country-specific (external only) |
| **Dimensions** | 5.25" W by 6.5" L by 1.5" H (external)<br>2.7" W by 5.4" L by .75" H (internal) |

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